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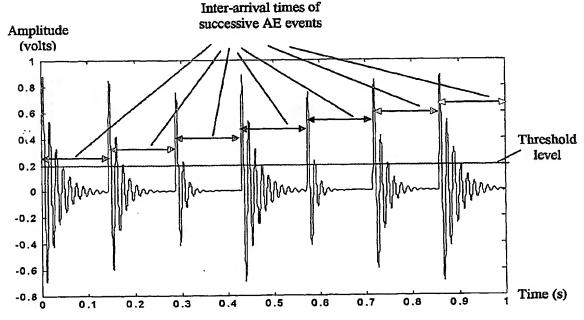
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[Continued on next page]

(54) Title: METHOD OF AND APPARATUS FOR SENSING THE CONDITION OF A DEVICE, PROCESS, MATERIAL OR STRUCTURE



(57) Abstract: There is disclosed a system for determining the condition of a device or process which uses the inter-arrival times of successive acoustic emission events generated by the device or process being monitored. From this measurement, the system determines a statistical distribution, preferably a Weibull distribution, to determine a shape to life parameter for characterising the device or process being monitored. The system allows a simple and effective determination of the condition of a device or process, taking into account operating conditions and which can monitor also the state of healthy components.

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